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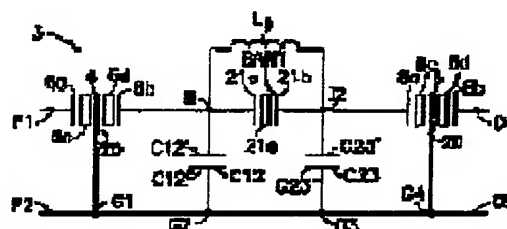
(54) MONOLITHIC FILTER USING THIN FILM BULK ELASTIC WAVE DEVICE AND MINIMUM PASSIVE ELEMENT FOR CONTROLLING SHAPE AND WIDTH OF PASSBAND RESPONSE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a multipolar type bulk elastic wave resonator stack type crystal filter (multipolar BAWR-SCF).

SOLUTION: A device 3 has a BAW resonator

(BAW1), stacked type crystal filters(SCF) 6 and 8, an impedance inverse element, including capacitors C12 and C23 and an inductor L0. Also, four ports P1, P2, O1 and O2 are included. BAW resonators BAW1 and SCF 8 are inserted serially between the ports P1 and O1. The BAW1 has the inductor L0 connected in parallel and both ends of the L0, that is, both ends of the BAW1, are grounded by way of the capacitors C12 and C23 respectively. Moreover, a central electrode 20 of the SCF6 and 8 is grounded. The ports P2 and O2 are essentially grounded, and this device, a multipolar type BAWR-SCF circuit 3, is a triode device.



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